



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-1140; Project Identifier AD-2020-01009-T; Amendment 39-21972; AD 2022-06-06]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2017-14-13, which applied to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. AD 2017-14-13 required a torque check of the screws in the cover assembly of the heel rest for both the captain's and the first officer's rudder pedals, and corrective action if necessary. This AD was prompted by a report of an aborted takeoff because the rudder pedals were not operating correctly, and subsequent reports of loose rudder pedal cover fasteners on airplanes on which the actions required by AD 2017-14-13 were done and on additional airplanes that were not included in the applicability of AD 2017-14-13. This AD requires modifying the rudder pedal cover and shroud assemblies, and applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes and Model 737-8 and 737-9 airplanes. This AD also limits the installation of affected parts under certain conditions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1140.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-1140; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Douglas Tsuji, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3548; email: douglas.tsuji@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-14-13, Amendment 39-18957 (82 FR 33007, July 19, 2017)

(“AD 2017-14-13”). AD 2017-14-13 applied to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. AD 2017-14-13 required a torque check of the screws in the cover assembly of the heel rest for both the captain’s and the first officer’s rudder pedals, and corrective action if necessary.

The NPRM published in the *Federal Register* on January 21, 2021 (86 FR 6273). The NPRM was prompted by a report of an aborted takeoff because the rudder pedals were not operating correctly and subsequent reports of loose rudder pedal cover fasteners on airplanes on which the actions required by AD 2017-14-13 had been done. These reports demonstrated that the required torque checks were ineffective in guaranteeing fastener retention and that additional airplanes that had not been included in the applicability of AD 2017-14-13 are also affected (i.e., all Model 737-8 and 737-9 airplanes; and Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, having line numbers 3556 and subsequent). In the NPRM, the FAA proposed to require modifying the rudder pedal cover and shroud assemblies with a new design that prevents the fasteners from backing out. The NPRM also proposed to limit the installation of affected parts under certain conditions, including modification of the cover or shroud assembly in accordance with the requirements of paragraph (h) of this AD. The FAA is issuing this AD to address cover assembly fasteners interfering with the operation of a rudder pedal. A fastener can back out and restrict rudder pedal motion and reduce differential braking control during takeoff or landing, which could cause a high-speed runway excursion.

Discussion of Final Airworthiness Directive

Comments

The FAA received supportive comments from two commenters: Air Line Pilots Association, International (ALPA) and United Airlines (UAL). ALPA supported the

NPRM without change. UAL supported the NPRM, but requested clarification regarding the method for part marking, as discussed later in this discussion.

The FAA also received comments from Boeing, Aviation Partners Boeing, and Delta Air Lines (DAL). The following presents the comments received on the NPRM and the FAA's response to each comment.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that the installation of winglets per Supplemental Type Certificate STC ST00830SE does not affect compliance with the proposed actions.

The FAA agrees with the commenter. The installation of STC ST00830SE does not affect an operator's ability to accomplish the actions required by this AD. The FAA has not changed this AD.

Request to Update the Service Information to the Latest Revision

Boeing requested that the FAA require Boeing Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021, because an individual airplane was omitted from the effectivity of the previous revision of the service bulletin (the NPRM proposed that operators do actions using Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 1, dated June 24, 2020).

The FAA agrees to require Boeing Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021, because the individual airplane added to the effectivity of that service bulletin was already in the applicability of the proposed rule and therefore no change to the applicability of the final rule is necessary.

Furthermore, Boeing Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021, does not add new actions or revise the existing actions specified in Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 1, dated June 24, 2020, which the NPRM proposed as a method of compliance for doing the actions required by this AD.

The FAA has revised this AD to specify that required actions be done in accordance with Boeing Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021, as applicable, and to give credit for actions done in accordance with Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 1, dated June 24, 2020.

Request to Change Applicability of the Proposed AD

Boeing requested that the applicability of the proposed AD be revised to match the effectivity defined in Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020, or Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 1, dated June 24, 2020. Boeing stated that the shroud and cover do not meet the definition of “rotatable parts” in the new configuration, because the parts are no longer interchangeable following modification and must also have the mating part (the part that attached to the aircraft structure) modified to be installed. Boeing also stated a “pre-modified part” cannot be installed on an airplane having the service bulletin modifications. Based on this non-interchangeability, Boeing does not consider these as rotatable.

The FAA disagrees with changing the applicability, as specified in paragraph (c) of this AD, because the FAA has determined there is a rotability issue. It is true that an original shroud assembly cannot be installed with an upper cover assembly modified as specified in the requirements bulletins identified in this AD, and conversely a shroud assembly modified as specified in the requirements bulletins cannot be installed with an original upper cover assembly. However, it is still physically possible to install an original shroud assembly and an original upper cover assembly (the combination with the unsafe condition) on an airplane not identified in the Boeing requirements bulletins. Therefore, no changes have been made to this AD regarding this request.

Request for Definition of “Production Equivalent”

Boeing and DAL requested that the FAA revise paragraph (g) of the proposed AD to further define what constitutes a “production equivalent.” DAL asked if certain part numbers and subsequent part numbers that are fully interchangeable can be installed. Boeing stated that more guidance is needed for operators on how to verify that the change is incorporated on production airplanes that have been delivered. Boeing stated that for airplanes modified by Boeing, operators do not have a corresponding maintenance record and that delivery records may be used for verification of production equivalent.

The FAA agrees with the request. The NPRM did not provide a definition of a “production equivalent,” which need not be further modified. Paragraph (g) of this AD has been revised to include the following information: “A production equivalent can be determined by its upper cover assembly part numbers (P/Ns 251A3122-15 (pilot) and 251A3122-16 (first officer), or later approved part numbers) and shroud assembly part numbers (P/Ns 233A2319-5 or -6, or later approved part numbers, used for both pilot and first officer).”

Request for Re-Identification of Modified Housing and Shrouds

DAL requested that the service information be revised. DAL stated that modified housing and shrouds should be re-identified with a new dash number instead of with the service bulletin number. DAL stated that configuration control could be an issue if the pre- and post-modification parts were to share a common part number. The commenter asserted that in an aircraft on ground or “AOG” situation (such as when a maintenance issue prevents the airplane from departing from an airport until the issue is resolved), the operator could find out too late that a part brought to the airplane is unmodified and is, therefore, restricted for installation, which could lead to an operational delay to allow for part modification prior to returning the aircraft to service. DAL argued that a new, unique part number would eliminate that risk.

The FAA disagrees with the requested change. The FAA acknowledges that parts are typically identified by part numbers, and that continued use of the same part number for both modified and unmodified parts could make it difficult for operators to keep track of them. However, the FAA disagrees with re-identifying modified parts with a new dash number, because some operators have already modified their airplanes using the existing service information and imposing this additional requirement would necessitate work unrelated to addressing the unsafe condition. Furthermore, waiting for revised service information that incorporates the identification of new dash numbers would delay the issuance of this AD. After this AD is issued, operators could coordinate with the manufacturer to create a unique new part number for parts modified in accordance with the service information, and the manufacturer could propose installation of the new part number as an alternative method of compliance (AMOC) to this AD. This AD has not been changed with regard to this request.

Request to Allow Part Marking by Hand Lettering

DAL requested a change in paragraph (i) of the proposed AD to specify either rubber stamp or hand lettering, because hand lettering is an acceptable alternate method of part marking for the affected part. DAL also stated that the manufacturer agrees hand lettering is an acceptable alternative to the rubber stamp method. In addition, UAL requested that the FAA clarify the part marking in the required for compliance (RC) step of the service information that refers to the standard overhaul practices manual (SOPM). UAL stated that the SOPM includes a note referring to alternate marking methods (i.e., hand lettering instead of rubber stamp).

The FAA disagrees with the request to modify paragraph (i) of this AD because the service information does not specify the method by which the part marking must be applied. This AD requires that part marking must be done. However, the method of part marking is not mandated, as the service information refers to the SOPM. The use of the

“refer to” indicates the SOPM is guidance on how to do the part marking. The SOPM specifies using a rubber stamp and allows for hand lettering as an alternative action so operators may use either method or may use an accepted alternative. This AD has not been changed regarding this request.

Request to Change to Allow Installation of New Housing

DAL requested a change to correct certain discrepancies in Boeing Alert Service Bulletin 737-27A1314, Revision 1, dated June 24, 2020. In the non-RC sections “Work Package 1, Part 2: Installation, Test and Close Access” and “Work Package 2, Part 2: Installation, Test and Close Access,” DAL asked for a change in wording of the proposed AD to indicate that a “new or changed” upper cover assembly could be installed. The commenter explained that the work instructions allow either Option 1 (modify then reinstall existing housing) or Option 2 (install new housing).

The FAA disagrees with the request. While the non-RC work instructions in Boeing Alert Service Bulletin 737-27A1314, Revision 1, dated June 24, 2020, accurately describe the allowable installations, changing the AD would not be warranted because the indicated sections are not within Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021 (or within Revision 1, dated June 24, 2020). “Work Package 1, Part 2: Installation, Test and Close Access” and “Work Package 2, Part 2: Installation, Test and Close Access,” of Boeing Alert Service Bulletin 737-27A1314, Revision 2, dated July 6, 2021, are for reference only. The manufacturer may choose to update this section of the service information in a future revision, but this section does not affect compliance with this AD. Operators can use either option as specified in

Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021.

This AD has not been changed regarding this request.

Clarification of Parts Installation Prohibition

Paragraphs (k)(1) and (2) of the proposed AD specified the parts installation prohibition for airplanes with an original airworthiness certificate or original export certificate of airworthiness issued after the effective date of this AD and prior to the effective date of this AD. However, airplanes with an original airworthiness certificate or original export certificate of airworthiness issued on the effective date of this AD were not identified in either paragraph. The FAA has revised paragraph (k)(1) of this AD to include the parts installation prohibition for airplanes with an original airworthiness certificate or original export certificate of airworthiness issued on or after the effective date of this AD.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting the requirements of this AD.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020; and Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021. The service information describes procedures for modifying the captain's and first officer's rudder pedal cover and shroud assemblies. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Costs of Compliance

The FAA estimates that this AD affects 2,048 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Modifying the rudder pedal cover and shroud assemblies	Up to 13 work-hours X \$85 per hour = Up to \$1,105	\$5,560	Up to \$6,665	Up to \$13,649,920

The FAA has included all costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2017-14-13, Amendment 39-18957 (82 FR 33007, July 19, 2017); and

- b. Adding the following new AD:

2022-06-06 The Boeing Company: Amendment 39-21972; Docket No. FAA-2020-1140; Project Identifier AD-2020-01009-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2017-14-13, Amendment 39-18957 (82 FR 33007, July 19, 2017) (AD 2017-14-13).

(c) Applicability

This AD applies to all The Boeing Company airplanes specified in paragraphs (c)(1) and (2) of this AD, certificated in any category.

(1) Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes.

(2) Model 737-8 and 737-9 airplanes.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight controls.

(e) Unsafe Condition

This AD was prompted by a report of an aborted takeoff because the rudder pedals were not operating correctly, and subsequent reports of loose rudder pedal cover fasteners on airplanes on which the actions required by AD 2017-14-13 were done and on additional airplanes that were not included in the applicability of AD 2017-14-13. The FAA is issuing this AD to address cover assembly fasteners interfering with the operation of a rudder pedal. A fastener can back out and restrict rudder pedal motion and reduce differential braking control during takeoff or landing, which could cause a high-speed runway excursion.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Determination of Modification Status

For airplanes with an original airworthiness certificate or original export certificate of airworthiness issued before the effective date of this AD: Within 27 months after the date of issuance of the original airworthiness certificate or original export certificate of airworthiness, or within 27 months after the effective date of this AD, whichever occurs later, determine whether the captain's and first officer's rudder pedal cover and shroud assemblies have been modified as specified in Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020; or

737-27A1314 RB, Revision 2, dated July 6, 2021; as applicable, or has a production equivalent. A production equivalent can be determined by its upper cover assembly part numbers (P/Ns 251A3122-15 (pilot) and 251A3122-16 (first officer), or later approved part numbers) and shroud assembly part numbers (P/Ns 233A2319-5 or -6, or later approved part numbers, used for both pilot and first officer). A review of airplane maintenance records is acceptable for this requirement if the modification status can be conclusively determined from that review.

(h) Modification

For airplanes that have not been modified as determined by paragraph (g) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020, or Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021, as applicable, except as specified by paragraph (i) of this AD, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020; or Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021; as applicable.

Note 1 to paragraph (h): Guidance for accomplishing the actions required by paragraph (h) of this AD can be found in Boeing Alert Service Bulletin 737-27A1313, Revision 1, dated June 24, 2020; and Boeing Alert Service Bulletin 737-27A1314, Revision 2, dated July 6, 2021; which are referred to in Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020; and Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021; respectively.

(i) Exception to Service Information Specifications

Where Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020; and Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2,

dated July 6, 2021, use the phrase “the original issue date of” each Requirements Bulletin for compliance, this AD requires using the effective date of this AD.

(j) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Requirements Bulletin 737-27A1313 RB, dated March 18, 2020; Boeing Alert Requirements Bulletin 737-27A1314 RB, dated March 18, 2020; or Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 1, dated June 24, 2020.

(k) Parts Installation Limitation

(1) For airplanes with an original airworthiness certificate or original export certificate of airworthiness issued on or after the effective date of this AD: As of the effective date of this AD, no person may install a captain’s or first officer’s rudder pedal cover or shroud assembly on any airplane, unless the cover or shroud assembly has been modified in accordance with the requirements of paragraph (h) of this AD.

(2) For airplanes with an original airworthiness certificate or original export certificate of airworthiness issued prior to the effective date of this AD: After the modification required by paragraph (h) of this AD has been done, no person may install a captain’s or first officer’s rudder pedal cover or shroud assembly on any airplane, unless the cover or shroud assembly has been modified in accordance with the requirements of paragraph (h) of this AD. Reinstallation of a rudder pedal cover or shroud assembly that has not been modified in accordance with paragraph (h) of this AD but has been removed for other maintenance is allowed.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local

Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2017-14-13 are not approved as AMOCs for the corresponding provisions of this AD.

(m) Related Information

For more information about this AD, contact Douglas Tsuji, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3548; email: douglas.tsuji@faa.gov.

(n) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 737-27A1313 RB, Revision 1, dated June 24, 2020.

(ii) Boeing Alert Requirements Bulletin 737-27A1314 RB, Revision 2, dated July 6, 2021.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 10, 2022.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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